

MIPUG INTERROGATORIES TO RCM/TREE
2010/11 & 2011/2012 HYDRO GENERAL RATE APPLICATION
DECEMBER 17TH, 2010

MIPUG/RCM/TREE (Chernick) I-1

Reference: Direct Testimony of Paul Chernick on Behalf of Resource Conservation Manitoba and Time to Respect Earth's Ecosystems, Table 2, page 29, page 23

- (a) Please provide the calculation of the 6.4 cent generation marginal cost for GS Large >100kV (Table 2, page 29). Please discuss if this figure appropriately reflects the 14% distribution losses described at page 23.

Response:

- (a) This interrogatory incorrectly equates "14% total losses at the distribution level" to "14% distribution losses." In actuality, the 14% figure consists of transmission as well as distribution losses. Hydro estimates that transmission energy losses are 9.6%, compared to 7% for distribution losses to secondary. The 6.4 cent generation marginal cost for GS Large > 100kV was calculated to eliminate the distribution component of losses.

Hydro's estimate of distribution energy losses to secondary is 7% (see Mr. Chernick's Table 1, derived from part 1 of Schedule D4, Appendix 11.1). The 6.4¢/kW.h value is the 6.9¢/kWh marginal cost (which Mr. Chernick assumes is computed at secondary) divided by 1.07.

MIPUG/RCM/TREE (Chernick) I-2

Reference: Direct Testimony of Paul Chernick on Behalf of Resource Conservation Manitoba and Time to Respect Earth's Ecosystems, Pages 34, 35

- (a) With respect to Mr. Chernick's discussion on inclining block rates for general service customers on pages 34 and 35, how would Mr. Chernick's rate design proposal affect a customer whose operation increased efficiency by expanding. For example an expansion that increased total electricity consumption but decreased the electricity used per unit of product.

Response:

- (a) Under Mr. Chernick's rate design proposal, the customer will face the full cost of the increased electric usage in making the decision whether to expand production and the full benefits of improved efficiency.

MIPUG/RCM/TREE (Chernick) I-3

Reference: Direct Testimony of Paul Chernick on Behalf of Resource Conservation Manitoba and Time to Respect Earth's Ecosystems, Page 29

- (a) With respect to Mr. Chernick's statement at page 29 that "Reducing domestic sales either increases exports, reduces purchases or reduces Manitoba Hydro's thermal generation. Any of these effects will reduce emissions of conventional pollutants" – if an industrial operation presently situated in a jurisdiction served primarily through thermal generation were to relocate to Manitoba, would this reduce emissions relative to exporting the same volume of electricity when considering line losses? Please discuss.

Response:

Lower losses, all else equal, will result in lower emissions. Off-peak, especially in drought conditions, when Hydro is purchasing power, losses would be higher if the operation is in Manitoba, rather than MISO, for example.

MIPUG/RCM/TREE (Chernick) I-4

- (a) Please confirm that Efficiency Vermont was created pursuant to state legislation and that state legislation authorizes its funding through system benefits charge on utility bills. If this cannot be confirmed please provide an explanation.

Response:

Confirmed.

MIPUG/RCM/TREE (Chernick) I-5

Reference: Direct Testimony of Paul Chernick on Behalf of Resource Conservation Manitoba and Time to Respect Earth's Ecosystems, Section IV

- a. Please confirm Mr. Chernick's recommendations in respect of Hydro's PCOSS involve changes to both subtransmission classification and allocation, and distribution classification and allocation.
- b. On subtransmission, Does Mr. Chernick have an estimate of the impact of his recommendation in respect of CP allocation as opposed to NCP?
- c. On distribution substations, is the effect of Mr. Chernick's recommendation that a load study (including class load characteristics) must be completed for each distribution substation?
- d. On distribution, Does Mr. Chernick have an estimate of the impact of his recommendation on the allocated distribution costs to each class?

Response:

- (a) Mr. Chernick's COSS recommendations involve changes to subtransmission allocation, and distribution classification and allocation. Mr. Chernick did not comment on Hydro's subtransmission classification.
- (b) Mr. Chernick has not estimated this effect on class rates of return, for two reasons. First, without access to Hydro's COSS model, this computation is impracticable. Second, since Hydro functionalizes some high voltage equipment as subtransmission plant, it may be appropriate to include some but not all of the ">100 kV" customer class load in the sub-transmission allocator. Hydro has not provided the portion of the ">100 kV" load that is served off of facilities functionalized as sub-transmission.
- (c) The analysis of class load characteristics for the substation analysis could be much simpler than the analysis for the entire system, and still be a major improvement over NCP. As Mr. Chernick noted in his testimony, the analysis might be conducted for representative substations, rather than separately for every substation.
- (d) Mr. Chernick has not estimated these impacts on class rates of return. Without access to Hydro's COSS model, this computation is impracticable.

MIPUG/RCM/TREE (Wallach) I-6

Reference: Direct Testimony of Jonathan Wallach on Behalf of Resource Conservation Manitoba and Time to Respect Earth's Ecosystems, page 35

- (a) Mr. Wallach indicates Hydro's risks could be reduced by increasing "its reliance on energy efficiency" (page 35). Please provide a numerical example of how reducing Hydro's firm domestic load by 100 MW (from DSM or energy efficiency) and consequently increasing dependable exports by the same amount leads to a less risky outcome.

ANSWER:

- (a) Mr. Wallach does not accept the premise that an increase in DSM or energy-efficiency savings would necessarily increase dependable exports by a like amount.

MIPUG/RCM/TREE (Wallach) I-7

Reference: Direct Testimony of Jonathan Wallach on Behalf of Resource Conservation Manitoba and Time to Respect Earth's Ecosystems, page 8

- (a) Please provide Mr. Wallach's understanding of how operating costs are "severely understated" in the Company's simulation models, and how this influences Mr. Wallace's conclusions in his evidence.

ANSWER:

- (a) Mr. Wallach's understanding of the findings of the KPMG and KM Reports regarding the impact of the Company's assumption of perfect foresight in the SPLASH model, and the implications of those findings, is described on pages 14 through 15 of his direct testimony.

MIPUG/RCM/TREE (Wallach) I-8

Reference: Direct Testimony of Jonathan Wallach on Behalf of Resource Conservation Manitoba and Time to Respect Earth's Ecosystems, page 10

- (a) Is it Mr. Wallach's understanding that Manitoba Hydro is primarily generating from "non-renewable" resources (such that renewable generation would be a "diversification")?

ANSWER:

(a) As noted on page 4 of his direct testimony, Mr. Wallach's understanding is that generation from hydro-electric facilities accounts for more than 95% of the Company's total annual output. Moreover, as noted on page 35 of his direct testimony, Mr. Wallach recommends that the Company consider the long-term economics and risk impacts of further diversification into wind generation (along with energy efficiency and efficient thermal generation.)

MIPUG/RCM/TREE (Wallach) I-9

Reference: Direct Testimony of Jonathan Wallach on Behalf of Resource Conservation Manitoba and Time to Respect Earth's Ecosystems, page 11

- (a) "...import power not lower than expected...". Is it Mr. Wallach's understanding that import power classified by Manitoba Hydro as "dependable supply" cannot be relied upon or may not ultimately be delivered by the counter-party, leading to lower than expected availability?

ANSWER:

- (a) Mr. Wallach's understanding is that, in general, there could be a risk that availability of import power would be less than expected due to uncertainty in import transfer capability or in other system conditions that could reduce availability of either contracted or market purchases of import power.

Mr. Wallach is unable to determine specifically what risks are associated with the sources of import power deemed by Manitoba Hydro to be dependable supply, since, as far as Mr. Wallach is aware, the Company has not specified in any detail the expected sources of import power, nor provided the actual provisions of any existing contracts for import power.

MIPUG/RCM/TREE (Wallach) I-10

Reference: Direct Testimony of Jonathan Wallach on Behalf of Resource Conservation Manitoba and Time to Respect Earth's Ecosystems, page 27

- (a) Please explain how "...matching cash flows to interest payments..." can cause "...a reduction to the equity ratio in the Company's capital structure..."?

ANSWER:

- (a) In general, a reduction to earnings volatility might allow for a reduction to the retained-earnings "cushion" deemed necessary to withstand large swings in net income and earnings.

Although KPMG cites improved earnings stability as a potential benefit of long-term contracts, Mr. Wallach does not make any recommendation in his direct testimony with respect to the appropriate amount of cumulative retained earnings or the appropriate equity ratio.

MIPUG/RCM/TREE (Wallach) I-11

Reference: Direct Testimony of Jonathan Wallach on Behalf of Resource Conservation Manitoba and Time to Respect Earth's Ecosystems, page 32, Re: redactions of all "No Sale" scenario data.

- (a) Please indicate if Mr. Wallach reviewed KPMG Report Appendix J page J-12.
- (b) If not, please indicate if the No Sale data provided in this table and elsewhere in this appendix results in any updates or modifications to his testimony.

ANSWER:

(a-b) Mr. Wallach reviewed Appendix J of the KPMG Report in its entirety prior to drafting his direct testimony in this proceeding. Mr. Wallach was fully aware of the data provided on page J-12 and elsewhere in Appendix J when he made his findings with respect to the redaction of data for the "No Sale Scenario" discussed on page 32 of his direct testimony.

Mr. Wallach makes two statements on page 32 of his direct testimony with respect to the redaction of No Sale Scenario data. First, on lines 6 through 7, Mr. Wallach states that all results with respect to the net present value costs for the No Sale Scenario were redacted from the KPMG Report. As far as Mr. Wallach is aware, Appendix J does not provide any data, redacted or otherwise, with respect to the net present value cost of the No Sale Scenario.

Second, on lines 22 through 25 of page 32, Mr. Wallach states that all results with respect to retained earnings for the No Sale Scenario were redacted from the KPMG Report. As far as Mr. Wallach is aware, all results with respect to retained earnings for the No Sale Scenario were redacted from Appendix J.

MIPUG/RCM/TREE (Wallach) I-12

Reference: Direct Testimony of Jonathan Wallach on Behalf of Resource Conservation Manitoba and Time to Respect Earth's Ecosystems, page 33, KPMG Appendix J

- (a) Mr. Wallach indicates the "Recommended Plan" drought-related losses from a drought starting in 2013 are not sustainable.
 - (i) Please review KPMG Pages J-2 (Sale Scenario) and J-12 (No Sale Scenario) and confirm that reductions to net income are effectively identical under the two scenarios for droughts starting in 2013.
 - (ii) Does Mr. Wallach believe there is a third "No Development" scenario that should separately be assessed as part of Hydro's Resource Plan?

ANSWER:

(a) On page 33 of his direct testimony, Mr. Wallach states that the KPMG risk analysis finds that drought-related losses would be unsustainable under certain drought scenarios. Moreover, on page 9 of his direct testimony, Mr. Wallach notes that the central issue of concern is not whether one development plan is more or less risky than another, but whether the financial risk associated with either plan is sustainable. Finally, on pages 9 through 10 of his direct testimony, Mr. Wallach discusses how the Company is in the process of developing the capability to estimate the likelihood of unsustainable outcomes. Consequently, Mr. Wallach did not recommend in his direct testimony the consideration at this time of alternative development plans.